

ABSTRACT OF THE DISCLOSURE

A liquid polyalphaolefin homo- or copolymer, preferably 1-decene, which is substantially amorphous is obtained by a polymerization process employing hydrogen and a particular type of metallocene catalyst. Additionally, liquid polyalphaolefin homo- or copolymer containing from 2 to about 12 carbon atoms possess a unique combination of properties, i.e., low molecular weight (M_w), low polydispersity index (M_w/M_n), controllable kinematic viscosity (Kv_{100}), low Iodine Number (I_2) and low glass transition temperature (T_g) and are substantially amorphous. The liquid polyalphaolefin homo- or copolymers provided herein are useful for manufacturing a variety of products including lubricating oils in which the polyalphaolefin functions as a viscosity modifier.